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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/624,098	07/24/2000	Mario Tenua	2527-1A	5268

7590

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EXAMINER

NAFF, DAVID M

ART UNIT

PAPER NUMBER

1651

DATE MAILED: 12/17/2002

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/624098

Applicant(s)

Tanaka et al

Examiner

Haff

Group Art Unit

1057

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 10/2/02.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-15 + 20 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-15 + 20 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Applicant Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/2/02 has been entered.

The request for consideration filed 9/13/02 after final rejection has been entered.

Claims examined on the merits are 1-15 and 20 which are all claims in the application.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 1-15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al (6,074,638) in view of Raskin et al (6,159,270) and Weltzien et al (4,919,702), and if necessary in further view of Behel Jr. (5, 366, 533).

The claims are drawn to a method of controlling soilborne pathogens in soil by adding to the soil a nitrogen containing material and a pH reducing agent to reduce the soil pH to below 5.5.

Anderson et al disclose that potato scab disease is known to be controlled by increasing soil acidity (col 3, lines 40-43).

Raskin et al disclose adding citric acid to soil to reduce the pH of the soil to 4.5-5.5 in removing contaminant metals in soil.

Weltzien et al disclose adding a fertilizer to soil that contains ascorbic acid (col 3, lines 19-29) and a nitrogen source (col 5, lines 25 and 34-37).

5 Babel Jr. discloses adding to soil a citrus by-product that provides citric acid in soil to complex with iron and make the iron available for plants (col 2, lines 55-66 and col 6, line 56).

When controlling potato scab disease by increasing soil acidity as disclosed by Anderson et al, it would have been obvious to add citric acid to the soil to provide the increased acidity as suggested by Raskin
10 et al, and if needed Babel Jr, disclosing adding citric acid to soil, and by Weltzien et al disclosing adding to soil a fertilizer containing ascorbic acid and a nitrogen source. Combining a nitrogen source with ascorbic acid as disclosed by Weltzien et al would have suggested combining a nitrogen source with acid added to provide the increased soil
15 acidity required to control potato scab disease as disclosed by Anderson et al since a nitrogen source would have obviously been expected to provide nitrogen as a nutrient for a growth of a plant requiring nitrogen for growth. Providing a pH below 5.5 to control potato scab disease would have merely required routine experimentation to determine an
20 optimum pH that provides a desired amount of control. The limitations of dependent claims would have been matters of obvious choice within the skill of the art in view of the disclosures of the references.

Response to Arguments

Applicant's arguments filed 9/13/02 after final rejection have been
25 fully considered but they are not persuasive.

Applicants urged that increasing soil acidity and application of fungicides to soil to control potato scab disease as disclosed by Anderson et al results from the fungicide, and not from increasing the acidity. However, Anderson et al is disclosing that increasing acidity
5 in combination with application of a fungicide results in control of potato scab disease. If acidity did not have an affect on control, increasing acidity would have not been mentioned. The present claims and specification do not exclude the presence of a fungicide.

Applicants provided an Exhibit A as showing the results of a study
10 of reducing soil pH using sulfuric acid on potato scab disease, and state that the study shows that merely lowering pH has no effect on potato scab disease incidents.

However, the study and results shown have not been presented in a declaration. Even if the study is presented in a declaration, the study
15 is unpersuasive. While the study may show that pH lowering alone has no affect, the study indicates that the affect of pH lowering is to convert nitrite to nitrous acid to obtain a sufficient amount of nitrous acid in soil to be lethal to *S. Scabies*. The amount of nitrous acid that is lethal is disclosed as 0.03 mM. Nitrous acid can be considered a
20 fungicide, and controlling *S. Scabies* as disclosed by the study is using a fungicide in combination with increasing acidity as in the prior art as suggested by Anderson et al. While the references applied may not disclose lowering the pH to produce sufficient nitrous acid to be lethal to *S. Scabies*, the present claims do not require the nitrogen containing
25 material added and reducing the pH below 5.5 to provide in the soil

sufficient nitrous acid to be lethal to *S. Scabies*. Adding any nitrogen containing material in any amount under any conditions in combination with lowering the pH below 5.5 will not result in producing sufficient nitrous acid in the soil to provide effective control of *S. Scabies* in
5 the absence of a fungicide other than nitrous acid.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M. Naff whose telephone number is (703) 308-0520. The examiner can normally be reached on Monday-Thursday and every other Friday from about 8:30 AM to about 6:00
10 PM.

If attempts to reach the examiner by telephone are unsuccessful, a message can be left on voice mail.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn, can be reached at telephone number
15 (703) 308-4743.

The fax phone number is (703) 872-9306 before final rejection or (703) 872-9307 after final rejection.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist
20 whose telephone number is (703) 308-0196.


DAVID M. NAFF
PRIMARY EXAMINER
ART UNIT 1651